

Weekly Wire
East Asia and Pacific
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JAPAN

Three U.S. science researchers awarded 2013 Japan Prize

The 2013 Japan Prize will be awarded to three U.S. researchers for their scientific contributions in the fields of semiconductor manufacturing and ecology.

The joint winners in the field of materials and production are C. Grant Willson, a chemistry professor at the University of Texas, Austin, and Jean M. J. Frechet, vice president of research at Saudi Arabia's King Abdullah University of Science and Technology, for developing materials that contributed to an innovative semiconductor manufacturing process.

The prize in the area of biological production and biological environment goes to John Frederick Grassle, professor emeritus of Rutgers University, for his findings on the biodiversity of deep-sea organisms.

The Japan Prize laureates receive a certificate of merit and a prize medal. A cash prize of 50 million yen (approx. US\$650,000) is also awarded for each prize field. The award ceremony will be held Tokyo on April 24.

<http://www.japanprize.jp/en/index.html>

NEW ZEALAND

RV Tangaroa sets sail to study how Antarctica affects ocean currents

A team of 22 Australian, New Zealand and French scientists will depart Wellington, New Zealand in early February 2013, onboard the RV Tangaroa, for a 42-day voyage to the Mertz Polynya region of Antarctica. The voyage is part of the research program of the Antarctic Climate and Ecosystems Cooperative Research Centre.

Antarctic bottom water is the densest in the ocean, so it spreads to fill the bottom of the global ocean. This means it has a significant influence on global ocean circulation. Scientists will also be looking at how much carbon is going into the deep ocean, and seek evidence for ocean acidification.

<http://www.niwa.co.nz/news/niwas-tangaroa-sets-sail-to-study-how-antarctica-affects-ocean-currents>

SINGAPORE

Photonics: On track for downsizing

Optical communications, or photonics, technology has failed to match the miniaturization of electronic components, mainly because of fundamental laws of classical optics. The smallest photonic devices are limited to sizes of at least a micrometer. Researchers from the Institute of Microelectronics in Singapore have now developed a device design that beats such size restrictions and can be easily integrated into a silicon chip.

<http://www.research.a-star.edu.sg/research/6620>